

Comprehensive Approach to Enhance Green Buildings in Urban Areas

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Abstract : The main objective of any engineering activity is the development of a system that fulfills the specific economic, social or environmental needs. Green growth policies, as a system, targets to satisfy two main needs: economic and environmental growth. Cities are complex systems composed of varied characteristics such as differences in socio-environmental conditions and local affordability, among others. Thus, commissioned policies are required to address these differences and to ensure green development. A more maintainable and justifiable, resource-efficient green growth can be obtained in urban areas if multi-criteria framework of policies relevant to green buildings is designed. Reason is that, this approach fits to target the differences and unique conditions of urban areas. By following the principles of axiomatic design, this paper urges to derive a framework for the application of green buildings policies in urban areas with distinctive socio-economic and environmental characteristics. Functional requirements defined as principles to ensure green growth and design parameters are identified in each set of conditions. Design matrices are constructed for each group of urban areas. Thus, the understanding of the needs and differences for each group of urban areas and the methodology to ensure green buildings is achieved.

Keywords : axiomatic design, green growth, sustainable development, urban planning

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